

Work Order ID 77944

77944

Page 1

December-23-11 10:24:08 AM

Item ID: D206-642-151

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Replacement Skidtube

Start Date: 22/12/2011 Start Qty: 1.00

1

Cust Item ID:

Required Date: 01/02/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan: M.C.J

Date: 11/12/23

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D3804

A

IIN-D206-642

O

100

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D206-642-151

CHG001

N/A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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110

0.00

110

Skidtubes

Skidtubes

Skidtubes

Memo

0.00

1-Deburr Fwd edge of tube

2- Remove ridge on inside of Fwd edge of tube as per Dwg D3804

3-Weld Fwd Cap as per Dwg D3804. Use aluminum rod. Grind D2647 to fit as required.

Pick:

Qty Part Number Description Batch

A/R Aluminum Rod M119712/M119785

4-Grind weld flush to cap on top surface only.

5-Cut Aft end as per dwg D3804 from front of tube and Deburr

6-Remove inner indexing ridge on Aft end of skidtube as per Dwg D3804

7-Open holes for Aft end cap as per Dwg D3804 with #30 Drill Bit using DT8025.

8-Drill pilot holes using Dt8166 & DT8169D & DT9771.

9-Locate DT8732 from inner Aft saddle hole & 3rd crossbolt hole. Insert D3286-1 doubler using DT8732 & D206-642-241-T1, then locating doubler off of 3/16" holes, cleco DT8732 & doubler leaving DT8732 for added support.

10- Drill D3286-1 doubler rivet holes in tube using # 30 drill, spot drilling doubler at the same time.

Handwritten: > DP 12-1-24

Handwritten: 78612-01-24

Handwritten: 7RM/DP 12-1-26

Handwritten: 12-1-30

Handwritten: 12-1-26

Handwritten: 2 SAD 12-02-06

W/O:		WORK ORDER CHANGES					
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Run Start ***NR1***

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11-Working from the center out, drill # 30 holes into D3286-1 doubler. Cleco each hole as it is being drilled. Verify angle of holes to accommodate rivet heads.

12-Remove 3/16" cleco's only and open GHW holes to Ø0.500" as per Dwg D3804

13-Remove D3286-1 doublers, identify orientation, deburr, then attach them to the workorder

14-Remove indexing edge using DT8741 as per Dwg D3804

15-C'sink GHW rivet holes as per Dwg D3804

16- Open Aft cap hole #6.

****no wearplate holes for this skidtube****

17-Deburr tube and blow out chips from inside the tube

120

QC6- Inspect dimensions to drawing

0.00

120

QC

Memo

0.00

Quality Control

8126214

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Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	Chemical Conversion Coat per QSI005 4.1	0.00							
140									
HandFinish	Memo	0.00				1	0	CF 12-2-1	
Hand Finishing									
150	QC3- Inspect Part Finish	0.00							
150									
QC	Memo	0.00				①	0	SAD 12-02-01	
Quality Control									
160	Skidtubes	0.00							
160									
Skidtubes	Memo	0.00				①	0	SAD 12-02-01	
Skidtubes	1-Open holes to finished size as per Dwg D3804, (without cutting fluid)								
	2-C'sink crossbolt spacer holes as per Dwg D3804(without cutting fluid)								
	3-Deburr and blow out all chips from inside the tube								

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Required Date: 01/02/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170	QC6- Inspect dimensions to drawing	0.00							
170									
QC	Memo	0.00							
Quality Control									
180		0.00							
180									
Skidtubes	Memo	0.00							
Skidtubes	1-Locate, install and rivet doublers as per Dwg D3804. Micro-shave rivets as required								BE12-02-01
	2-Bond D2654-1 web in place as per QSI 015. Ensure holes line up. Allow 12 Hrs. cure time before cutting								
	Start Date: 12-02-01 Time: 6:00 PM								BE12-02-01
	Finish Date: 12-02-02 Time: 11:00								
	Pick:								
	Qty Part Number Description Batch								
	A/RSikaflex-291 M119999								
	Sikaflex expire date: 2012/08/13								

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1

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1

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC5- Inspect part completeness to step on W/O

0.00

190

12-2-2

QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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 Start Date: 22/12/2011 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 01/02/2012 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200	Skidtubes	0.00							
200									
Skidtubes	Memo	0.00							
Skidtubes	1-remove alodine from around hole and prepare for welding								
	2-Prep per QSI 005 and Insert D2649 crossbolt spacers. Weld as per QSI 004 and Dwg D3804. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod. Pick: QtyPart NumberDescriptionBatch A/RAluminum Rod <u>m119785</u>								
	3-Grind welds flush as per Dwg D3804.								
	4-Using DT8733, insert (2) D3286-3 spacers as per QSI 004 and Dwg D3804. Remember to back drill each hole to Ø0.402" before welding other side. Use SS rod as required. A/RSS Rod <u>NONE</u>								
	5-Counterbore 5/16" x 0.750" deep except 7th hole from Aft end as per Dwg D3804. Deburr								

BE12-02-02

BE12/02/06

DP 12-2-9

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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 22/12/2011 **Start Qty:** 1.00

*** 1 ***

Cust Item ID:

Required Date: 01/02/2012 **Req'd Qty:** 1.00

* 1 *

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

210

210

HandFinish

Hand Finishing

HandFinishing

Memo

Install D2680-041 Nut Plate as per Dwg D3804

0.00

0.00

215

215

QC

Quality Control

QC9- Inspect visual per QSI004- Fusion Welds

Memo

0.00

0.00

220

220

QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

Memo

0.00

0.00

Dart Aerospace Ltd

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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1

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1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230	QC5- Inspect part completeness to step on W/O	0.00							
230		0.00							
QC	Memo	0.00							
Quality Control									
240	Pressure Wash per QSI005 4.3	0.00							
240		0.00							
HandFinish	Memo	0.00							
Hand Finishing									
250	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
250									
Powdercoat	Memo								
Powder Coating									

W119480

10:20
320°F
10:50

1 of 12/02/13

1X of 12/02/15

Dart Aerospace Ltd

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 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
260	QC3- Inspect Part Finish	0.00							
260						1RH	φ	11	12/02/11
QC	Memo	0.00							
Quality Control									
270	HandFinishing	0.00							
270						1RH	φ	11	12/02/11
HandFinish	Memo	0.00							
Hand Finishing	1-Install D2651-3 O-Rings on D2651-1 plugs with Petroleum Jelly and install plugs as per Dwg D3804. Clean excess adhesive.								

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
280	HandFinishing	0.00							
280									
HandFinish		0.00							
Hand Finishing	Memo ✓ 1-Install D2646 Aft Cap and seal with Sikaflex. Clean excess adhesive A/RSikaflex-291 <u>M/11/4508</u> Sikaflex expire date: <u>12/08</u> 2- Install wearplate as per dwg ✓ 2-Wing Walk as per Dwg D3804 and QSI 005 4.4 Batch: <u>M/11/4094</u>								
290	QC3- Inspect Part Finish	0.00							
290									
QC	Memo	0.00							
Quality Control									

1 0 all in 02/11
1 BL 12-2-21.

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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300	QC5- Inspect part completeness to step on W/O	0.00							
300									
QC	Memo	0.00							
Quality Control									
310	Packaging	0.00							
310									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D206-642-151								
	Location: _____								
	PPP Rev: _____								
320	QC21- Final Inspection - Work Order Release	0.00							
320									
QC	Memo	0.00							
Quality Control									

MF
12-02-11

Dart Aerospace Ltd

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Picklist Print

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Parent Item: D206-642-151

D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 22/12/2011

Required Date: 01/02/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 10.12.08 PER IIN REV.N DD VERF:EC IPP
REV:B 11.09.16 PER IIN REV.O DD VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D2620		Manufactured	No			110	Each	13.0000	1	1			
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D2620

Skidtube, 206 Skidtube

**

D 12-1-24

Location	Loc Qty	Loc Code
LG 77997	13	
71616	3	
71617	6	
75470	2	
75587	2	

(1)

D2647		Manufactured	No			110	Each	183.0000	1	1			
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D2647

Cap

**

- BE12-01-24

Location	Loc Qty	Loc Code
LG002	183	
73826	74	
75482	109	

1

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D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 22/12/2011

Required Date: 01/02/2012

Start Qty: 1.00

Required Qty: 1.00

CR3212-4-04

Purchased

No

180

Each

12,557.00

52

52

CR3212-4-04

Cherry Rivet

**

BE12-02-01

Location

Loc Qty

Loc Code

ST331

2567

116471

78

117816

3

118686

1

118840

16

119017

2459

119075

10

st510

9990

119075

9990

52

D2654-1

Manufactured

No

180

Each

0.0000

1

1

D2654-1

Web

**

77281
BE12-02-01

D3286-1

Manufactured

No

180

Each

178.0000

2

2

D3286-1

Doubler

**

SAD 12-01-31

Location

Loc Qty

Loc Code

LG002

178

74872

6

75484

54

876772

2

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December-23-11 10:24:13 AM

Work Order ID: 77944

77944

Parent Item: D206-642-151

D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 22/12/2011

Required Date: 01/02/2012

Start Qty: 1.00

Required Qty: 1.00

D2649 Manufactured No

200 Each 634.0000 19 19

D2649

Cross Bolt Spacer

BE 12-02-02
Q 78020 19

Location	Loc Qty	Loc Code
LG001	634	
65317	1	
68224	2	
68507	11	
71355	2	
72704	2	
72841	11	
73390	8	
73857	21	
73858	53	
73859	4	
73860	4	
76793	515	

D3286-3 Manufactured No

200 Each 18.0000 2 2

D3286-3

Spacer

BE 12-02-02
Q 78015 02

Location	Loc Qty	Loc Code
LG001	1	
74117	1	
LG002	17	
75483	17	

D2680-041 Manufactured No

210 Each 64.0000 1

D2680-041

Nut Plate

Q 7812/02/06

Location	Loc Qty	Loc Code
ST020	64	
75479	64	

76790

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

Page 4

December-23-11 10:24:13 AM

Work Order ID: 77944

77944

Parent Item: D206-642-151

D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 22/12/2011

Required Date: 01/02/2012

Start Qty: 1.00

Required Qty: 1.00

CR3212-4-03

Purchased

No

210

Each

1,762.000

2

2

CR3212-4-03

Cherry Rivet

**

(2) 12/02/06

Location

Loc Qty

Loc Code

FP002

768

114859

768

ST331

994

110139

2

119017

992

AN960JD416

NAS1149D0463J

Purchased

No

210

Each

0.0000

1

1

AN960JD416

Washer

**

1118384 (41) 12/02/06

CCR264SS3-3

Purchased

No

210

Each

993.0000

2

2

CCR264SS3-3

Cherry Rivet

**

(2) 12/02/06

Location

Loc Qty

Loc Code

ST331

993

113973

2

117849

147

119017

844

MS27039-4-06

Purchased

No

210

Each

323.0000

1

1

MS27039-4-06

Screw

**

12/02/06

Location

Loc Qty

Loc Code

ST292

323

119075

323

1

December-23-11 10:24:13 AM

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Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

Page 5

December-23-11 10:24:13 AM

Work Order ID: 77944

77944

Parent Item: D206-642-151

D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 22/12/2011

Required Date: 01/02/2012

Start Qty: 1.00

Required Qty: 1.00

D2651-1

Manufactured No

270

Each

357.0000

6

6

D2651-1

Plug

**

1378584 (x6) all blocks

Location

Loc Qty

Loc Code

FP001

357

57869

1

66445

10

69018

2

70839

2

71037

31

73827

311

D2651-3

Manufactured No

270

Each

847.0000

6

6

D2651-3

O-Ring

**

1378126 (x6) all blocks

Location

Loc Qty

Loc Code

FP001

847

61962

12

73828

835

D3873-1

Manufactured No

280

Each

611.0000

14

14

D3873-1

Bushing

**

14 12.2.16

Location

Loc Qty

Loc Code

ST088

611

64760

1

68247

4

73829

19

73830

2

76792

585

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Picklist Print

December-23-11 10:24:13 AM

Work Order ID: 77944

77944

Parent Item: D206-642-151

D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 22/12/2011

Required Date: 01/02/2012

Start Qty: 1.00

Required Qty: 1.00

D2646 Manufactured No

280 Each 153.0000 1 1

D2646

Aft Cap

**

12/02/16

Location

Loc Qty

Loc Code

FP002

153

62678

5

68280

5

70945

1

71038

4

71070

2

73294

1

73825

135

1

D3805-041 Manufactured No

280 Each 1.0000 1 1

D3805-041

Wearplate Assembly Fwd, Low Gear

**

12-2-21

Location

Loc Qty

Loc Code

FP001

1

75149

1

1

MS27039-1-08 Purchased No

280 Each 1,243.000 2 2

MS27039-1-08

Screw

**

12/02/16

Location

Loc Qty

Loc Code

ST291

1243

117423

77

118910

226

119075

440

119109

500

12

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

Page 7

December-23-11 10:24:13 AM

Work Order ID: 77944

77944

Parent Item: D206-642-151

D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 22/12/2011

Required Date: 01/02/2012

Start Qty: 1.00

Required Qty: 1.00

MS21042L3

Purchased

No

280

Each

6,837.000

7

7

MS21042L3

Nut

**

ul n/02/16

Location

Loc Qty

Loc Code

ST300

6837

117441

16

117885

32

118451

5

118927

3

119017

5988

119075

793

x7

D3805-045

Manufactured

No

280

Each

2.0000

1

1

D3805-045

Wearplate Assembly Aft, Low Gear

**

11/12/16

Location

Loc Qty

Loc Code

FP001

2

73817

1

74896

1

1

AN960JD10L

NAS1149D0332J

Purchased

No

280

Each

0.0000

2

2

AN960JD10L

Washer

**

11/19/042(x2) ul n/02/16

AN3-37A

Purchased

No

280

Each

1,546.000

7

7

AN3-37A

Bolt

**

ul 12/02/16

Location

Loc Qty

Loc Code

ST353

1546

117619

4

119086

1542

x7

December-23-11 10:24:13 AM

Shop Packet Print

Page 7

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____
Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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Picklist Print

Page 8

December-23-11 10:24:13 AM

Work Order ID: 77944

77944

Parent Item: D206-642-151

D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 22/12/2011

Required Date: 01/02/2012

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0363J

Purchased

No

280

Each

2,252.000

7

7

NAS1149D0363.I

Washer

**

11/20/12 (x2) 11/20/12

Location

Loc Qty

Loc Code

ST298

2252

117601

61

118077

1

118612

18

118968

137

119537

2035

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

ITEM	Qty -041	Qty -043	Part Number	Description
1	X		D3804-041	SKIDTUBE ASSEMBLY, 206 A/B LOW
2		X	D3804-043	SKIDTUBE ASSEMBLY, 206 A/B HIGH
5	1	1	D2600-1-160	EXTRUSION
6	1	1	D2646	AFT CAP
7	1	1	D2647	CAP
8	19	20	D2649	CROSS BOLT SPACER
9	6	8	D2651-1	PLUG
10	6	8	D2651-3	O-RING
11		1	D2654-3	WEB
12	1		D2654-1	WEB
13	1	1	D2680-041	NUT PLATE
14	2	2	D3286-1	DOUBLER
15	2	2	D3286-3	STUD
21	2	2	AN960JD10L	WASHER
22	1	1	AN960JD416	WASHER
23	2	2	CCR264SS3-3	RIVET
24	2	2	CR3212-4-03	RIVET
25	52	52	CR3212-4-04	RIVET
26	2	2	MS27039-1-08	SCREW
27	1	1	MS27039-4-06	SCREW

NOTES

- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 7) IDENTIFICATION: NONE
- 8) WEIGHT: 12.5 lb
- 9) WELD PER DART QSI 004
- 10) BENDING: DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 11) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 12) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 77944 M.L.5

11/12/23

RELEASED
UP 09.05.03
per ECN 09-536

A	NEW ISSUE	MB	08.07.07
REV.	DESCRIPTION	BY	DATE
DESIGN	97		
DRAWN	1		
CHECKED	2		
MFG. APPR.	3		
APPROVED	4		
DE APPR.	5		
DATE	08.07.07		

DART AEROSPACE USA, INC PORT HADLOCK, WA	
DRAWING NO. D3804	REV. A SHEET 1 OF 5
TITLE SKIDTUBE ASSEMBLY, 206A/B	SCALE NTS
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Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

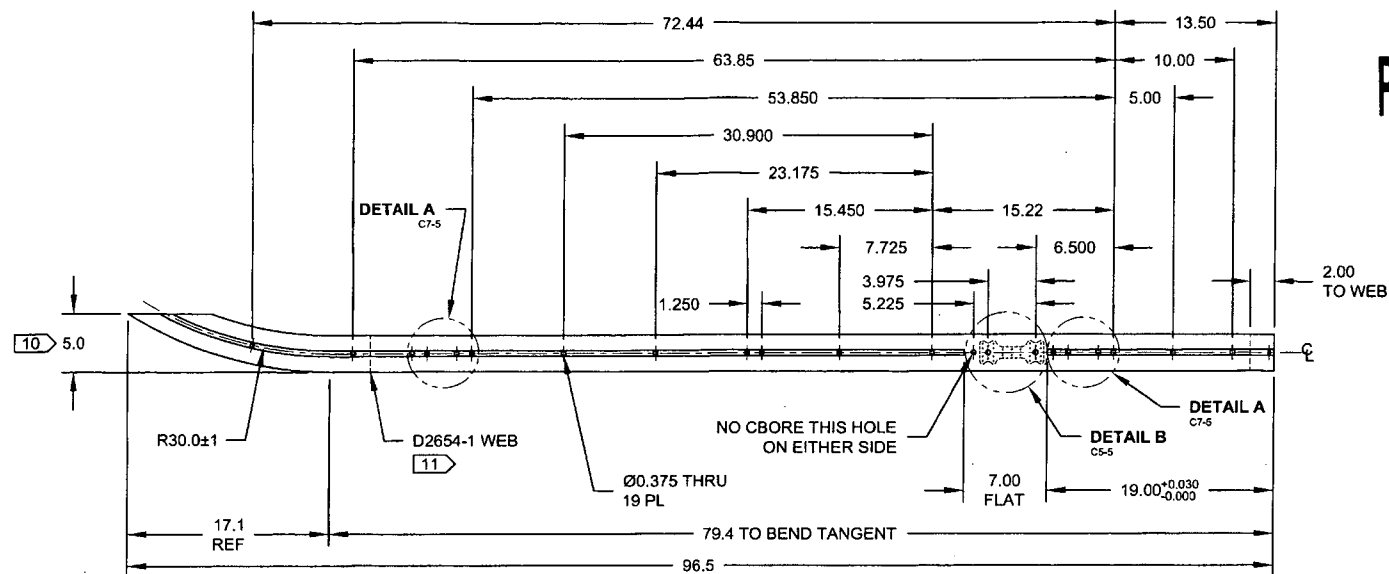
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

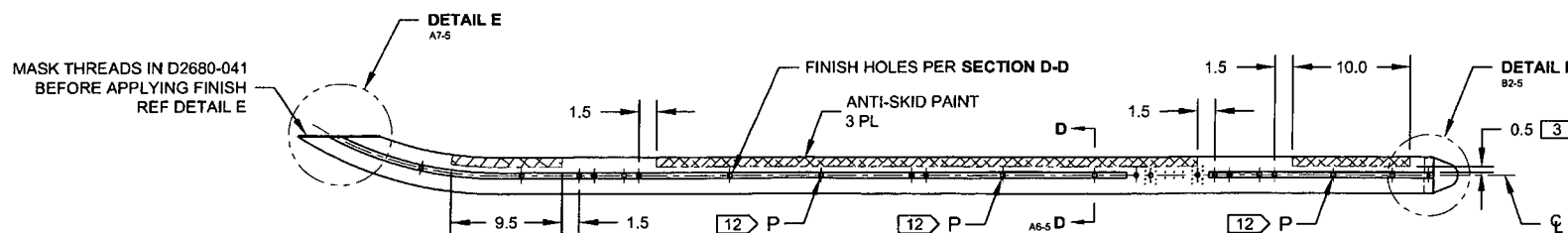
NOTE: Date & initial all entries

77944

RELEASED
09.03.03



D3804-041 BENDING/DRILLING DETAIL



D3804-041 ASSEMBLY/FINISHING DETAIL

DESIGN	91	DART AEROSPACE USA, INC	
DRAWN	91	PORT HADLOCK, WA	
CHECKED	91	DRAWING NO.	REV. A
MFG. APPR.	91	D3804	SHEET 2 OF 5
APPROVED	91	TITLE	SCALE
DE APPR.	91	SKIDTUBE ASSEMBLY, 206A/B	NTS
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Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

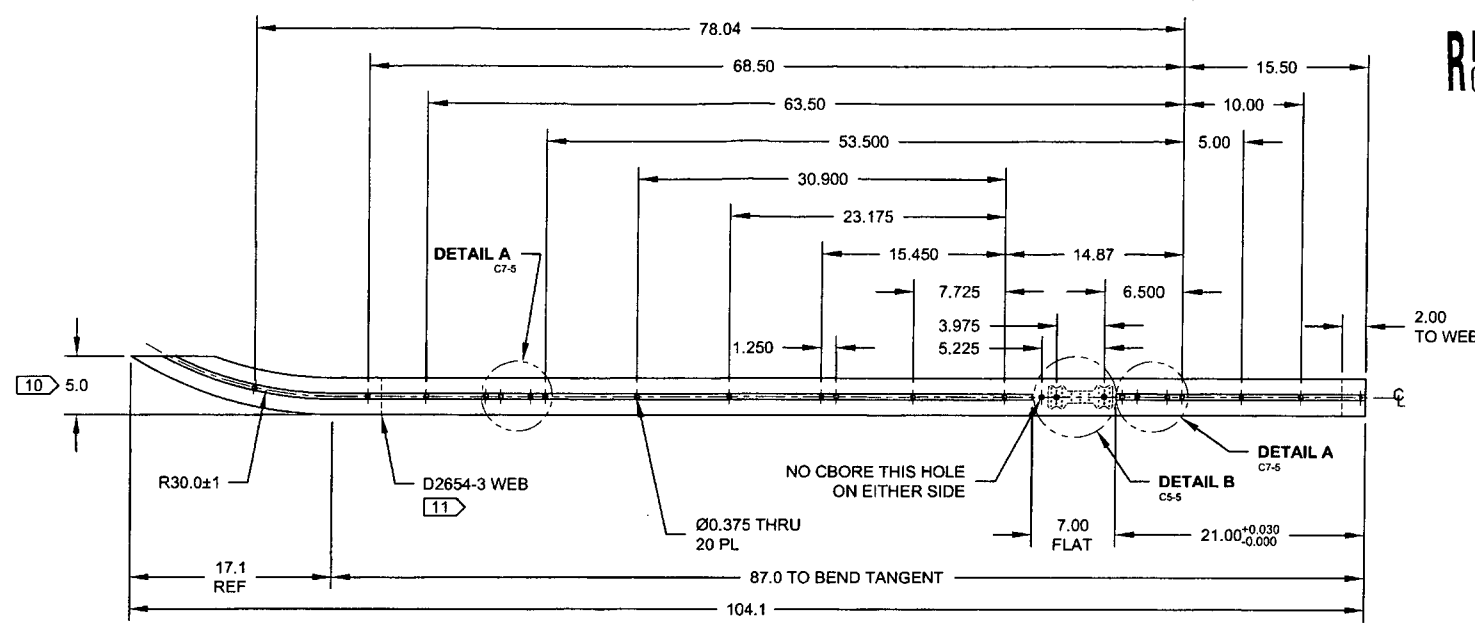
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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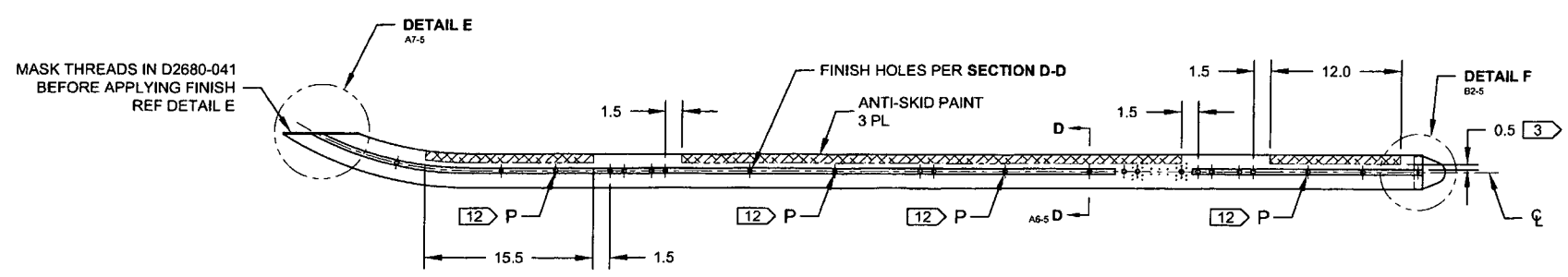
NOTE: Date & initial all entries

77944

RELEASED
09-03-03



D3804-043 BENDING/DRILLING DETAIL



D3804-043 ASSEMBLY/FINISHING DETAIL

DESIGN	97	DART AEROSPACE USA, INC	
DRAWN	97	PORT HADLOCK, WA	
CHECKED	97	DRAWING NO.	REV. A
MFG. APPR.	97	D3804	SHEET 3 OF 5
APPROVED	97	TITLE	SCALE
DE APPR.	97	SKIDTUBE ASSEMBLY, 206A/B	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

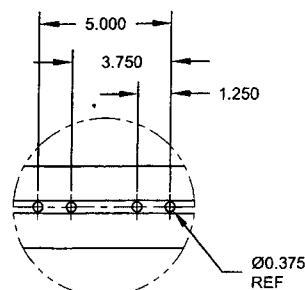
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

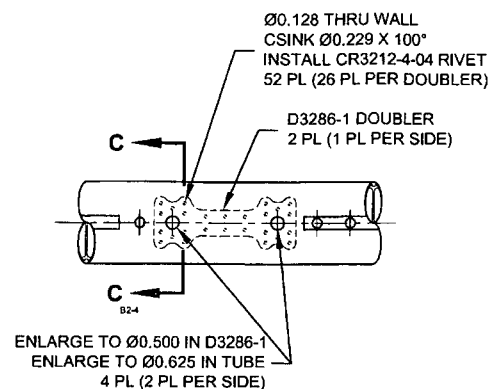
NOTE: Date & initial all entries

77944

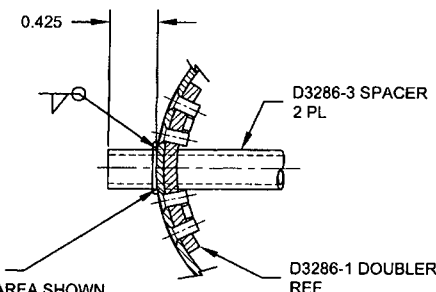
RELEASED
CP 09.03.03



DETAIL A
SCALE NONE

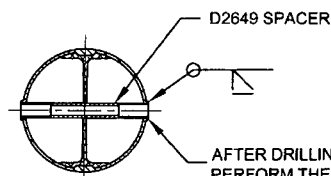


DETAIL B
SCALE NONE



- TO INSTALL D3286-1/-3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH OUTSIDE SURFACE OF ROUND TUBE
 2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
 3. ENLARGE HOLES IN D3286-1 TO Ø0.500
 4. ENLARGE HOLES IN TUBE TO Ø0.625 AND CHAMFER HOLE 0.03 X 45°
 5. RIVET D3286-1 TO TUBE
 6. INSERT D3286-3 SPACER
 7. WELD IN PLACE AND GRIND FLUSH

SECTION C-C
PARTIAL SECTION
SCALE NONE



- AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
1. CHAMFER HOLE 0.03 X 45°
 2. INSERT D2649 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. CBORE TO Ø0.313 X 0.75 DP (EXCEPT WHERE INDICATED)

SECTION D-D
FOR Ø0.375 HOLES ONLY
SCALE NONE

DESIGN	91	DART AEROSPACE USA, INC	
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CHECKED	1	DRAWING NO.	REV. A
MFG. APPR.	1	D3804	SHEET 4 OF 5
APPROVED	1	TITLE	SCALE
DE APPR.	1	SKIDTUBE ASSEMBLY, 206A/B	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

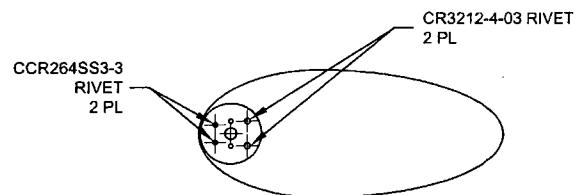
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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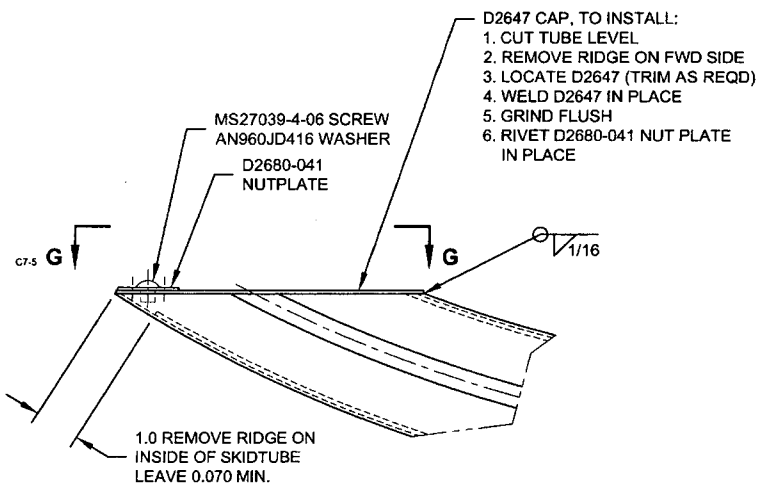
NOTE: Date & initial all entries

77944

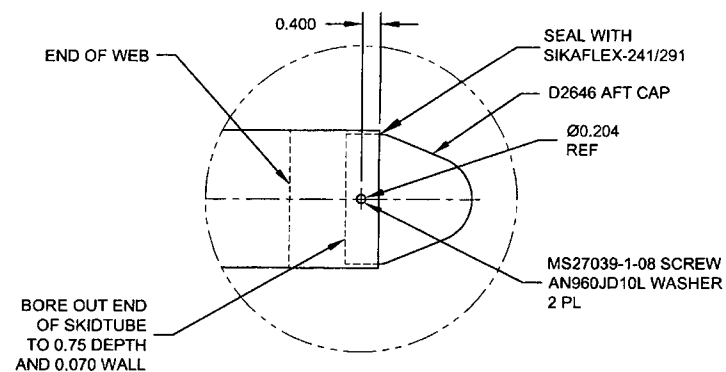
RELEASED
97 09.03.03



VIEW G-G
SCALE NONE
A7-5



DETAIL E
SCALE NONE
B7-2 B7-3



DETAIL F
SCALE NONE
B2-2 B2-3

DESIGN	91	DART AEROSPACE USA, INC	
DRAWN	91	PORT HADLOCK, WA	
CHECKED	91	DRAWING NO.	REV. A
MFG. APPR.	91	Q3804	SHEET 5 OF 5
APPROVED	91	TITLE	SCALE
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR: Yes No** **DQA:** _____ **Date:** _____
Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 25

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Ameloy, E. M.
Job number: 77982
Part number: 186-242-15
Description: 5202.6
Welding Process: Tig[] Mig[]
Base material: Aluminum
Current: AC[] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier Ameloy, E. M. Date of Test Coupon 12-21-05

Welder Ameloy, E. M. Date of Test Coupon 12-21-05

The above named individual is qualified in accordance with AWS D17.1.2001 to weld